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ABSTRACT

The discussions of four family-related topics by 85 married couples were recorded and analyzed to test the validity of an expanded version of the relational communication coding system developed by L. Edna Rogers and Richard V. Farace. The expanded version of the system is based on the implicit intensity continuum that underlies the communication coding scheme. The exploratory correlational analyses between message intensity and pronoun usage, transactional structures, control maneuvers, and measures of rigidity/stability supported the coding system's utility and construct validity. The intensity measures suggested a homeostatic nature of conversations among persons in long-term relationships. The conversations appeared to revolve around some intensity "set point" in consistent ways. The intensity measures also helped to further describe and differentiate married couples in terms of dominance patterns and the differential uses of control maneuvers. (RL)

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MESSAGE CONTROL INTENSITY:

RATIONALE AND PRELIMINARY FINDINGS

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MESSAGE CONTROL INTENSITY: RATIONALE AND PRELIMINARY FINDINGS

The relational approach to the study of communicative behaviors adopts a systems perspective.[1] This perspective is not primarily concerned with the content or "report" aspects of interaction, but rather with the shape or form of the "command" aspects as they evolve over time.[2] A relational orientation assumes that the "factuality" of a social relationship is its form rather than its content, that form is observable while content is inferred.[3] As such, this approach is primarily concerned with the description of behavioral "holons" which characterize how social relationships are maintained and changed.[4] This paper offers an expansion of the relational control coding procedures described by Rogers and Farace,[5] in the attempt to move us one step closer to holistically describing transactional patterns--the form of social relationships. The purpose and potential value of this expansion has been expressed by Parks:

> Typically relational messages have been conceptualized in terms of discrete nominal variables: a message is either a "one-up," a "one-down," or a "one-across." Existing conceptualizations would profit from the development of an intensity measure. Some "one-up" messages, for example, certainly make a stronger assertion of control than others. An intensity measure might either be derived from existing coding schemes or independently conceptualized. The inclusion of such a dimension would enhance our sensitivity to the nuances of relational communication patterns.[6]

In an initial work utilizing the relational coding scheme, Rogers suggested two modifications of the scheme--an intensity measure and a message duration measure.[7] While message duration is a rather straightforward time measure, the present paper is devoted to explicating and implementing the more complex variable of intensity. The utility of

this measure for graphing conversations transactionally can be illustrated by the use of a wave analogy. At present, the graphing of sequentially ordered message control directions form wave-like patterns, but the height of these waves are limited to the three control maneuvers of one-up, one-across, and one-down.[8] The purpose of an intensity measure is to increase the variation along the vertical axis of these transactional waves. The ability to index more variation in the peaks and valleys of verbal conversations will allow transactional configurations to be more precisely differentiated. In this manner, the nuances of relational patterns can be more fully described and more finely tuned theorizing can proceed.

DEVELOPMENT OF THE MESSAGE CONTROL INTENSITY MEASURE

Previous work has suggested that a measure of control intensity was possible by viewing messages as reflecting differing units or amounts of upness, acrossness and downness.[9] For example, a message categorized as "an order would appear to be a stronger attempt to move one-up than would an instruction. Similarly, asking for approval might indicate a greater willingness to move one-down than would giving approval."[10]

This early call for an expansion of the three control movements was incorporated into a coding scheme devised by Ellis.[11] This system categorizes messages into five states: dominance, a strong up (↑+), structuring, a weak up (↑-), equivalence (→), deference, a weak down (↓-), and submission, a strong down (↓+). Ellis' work, the first in this area to include intensity, is suggestive of the utility of weighting messages according to their amounts of upness and downness but expands the trichotomy by only two levels.

In the present attempt to develop an expanded measure of intensity, a focal question was whether such a measure could be derived from the Rogers-Farace scheme, or alternatively, did the notion of intensity have to be independently conceptualized and overlaid on the coding system? It would seem that if intensity was conceived of as an independent quality that messages "have" or "possess," then its measures were likely to be limited to the ordinal levels used by Ellis. If, however, intensity was conceived of as movement in some conceptual space, then such a measure would be limited only by the parameters delineating that space. Framing the issue in this way, the question became how to derive the parameters of this hypothetical intensity space from the existing scheme rather than how to create a measure of some inherent quality of messages called "intensity."

To achieve conceptual rigor, the means used to derive this hypothetical space must be logically consistent with the definitions of the message types prescribed by the Rogers and Farace coding scheme. Moreover, this delineation must involve only the message codes per se, and not interpretations of their content or meanings. Recalling that the relational coding scheme defines fifty message types, it seemed reasonable that these might represent discrete points on some hypothetical intensity continuum. If they did, this continuum of points could define the vertical axis of conversational graphs with sequential messages plotted over time representing the horizontal axis. In this manner, an intensity space could be created within which message movements may be plotted. The wave pattern (i.e., the form of a relationship) resulting from this graphing could then be compared and contrasted against various criterion variables.

Given that there are 50 message types identified in the coding scheme, it was assumed that the height of the vertical axis would be fifty "units" or some fraction thereof. Granting this assumption, the crucial question arises--namely, where and how to place the various message types along this axis? The response modes from the Rogers-Farace scheme were addressed first. (See Figures 1 and 2. The response modes are arranged horizontally across the top of the figures while the grammatical codes are arrayed vertically.)

Since movement implies "distance from," the response mode which implies the least distance between interactants is "support," a type of response that suggests "closeness" or "agreement with" the other's definition of the situation. The support category was, therefore, assigned the minimum intensity weight of one. In contrast, the response mode that functionally implies the greatest distance from the other is "disconfirmation." This mode suggests an ignoring of other, i.e., not just a disagreement with what was said, but rather a denial or negation of the other's right to even attempt to define the relationship.[12] Accordingly, the disconfirmation mode was assigned a maximum intensity weight of ten.

After identifying the least and most intense response modes, it became apparent that an implicit "logic" of intensity as "distance from" already existed in the coding scheme. This implicit logic consisted of the number of times a given response mode can be other than a one-up movement. "Support," for example, is always coded as a one-down maneuver, while the category "other" can be a one-down in two different ways. Similarly, an "extension" mode can be a one-down movement in only one way, while "initiates-terminates" can never be

a one-down, but can be a one-across movement. Accordingly, these four response modes were weighted as follows: support (1), other (2), extension (3), and initiation-termination (4).

The remaining six categories, however, represented a different problem since each of them is always coded as a one-up maneuver. Distinguishing between them must be definitional and conceptual rather than taken directly from the control code transformation matrix. After extensive review of the response mode definitions, the remaining six modes were ranked in the following ascending order in terms of their functional distancing from the previous message: answer (5), instruction (6), non-support (7), topic change (8), order (9), and disconfirmation (10).[13]

[Figures 1 & 2 Here]

Having ranked the response modes, it became necessary to ask if the grammatical form in which the message was transmitted should also be used to derive the intensity weight. Our previous review of the literature had strongly suggested their utility. For example, a talk-over-as-disconfirmation suggests a greater distance from the other than a question-as-disconfirmation. Accordingly, the application of the implicit "logic" of the coding scheme (i.e., the number of ways a grammatical code could be other than a one-up movement) weighted the five grammatical codes in the following ascending order in terms of their implied distance from the other: noncomplete (1), question (2), other (3), assertion (4), and talk-over (5).

Having ranked the ten response modes and five grammatical forms, intensity values were obtained by multiplying the two rankings for each of the 50 message types. These final intensity weights--i.e.,

points on our hypothetical intensity continuum--are displayed in Figure 2 with the codes arranged in descending order. The intensity range of the three message directions is 5 to 50 for one-up, 2 to 12 for one-across and 1 to 10 for one-down. These weights were then assigned to the messages coded in one of our husband-wife taped conversations and a transactional graph was plotted. The wave pattern shown in Figure 3 represents the form of the dyadic relationship as movement within our hypothetical intensity space.

The preceeding pages have attempted to describe the reasoning behind the intensity measure proposed. This was done so that the reader might better follow both the overall goal of the suggested expansion, as well as the specific manner in which it was derived from the Rogers-Farace scheme.

[Figure 3 About Here]

Validity of the Intensity Construct

Before presenting and discussing the relationships between message intensity and other salient constructs in the relational area, possible objections to the construction and utilization of the intensity measure must be recognized and addressed. The two obvious objections to the approach outlined are (1) the arbitrariness and artificiality of the intensity construct, and (2) the appearance of intervality of the continuum of intensity scores. Since these two objections are interrelated, a single response will address both.

At a general level, systems theorists are divided over the question of whether the variables of interest should be operationalized from a "realistic" or "instrumental" orientation--i.e., whether

these variables must truly exist in nature, or whether they can be artificial constructs of the theorist. In addressing this point, Cushman and Pearce suggest:

> Opinions differ among systems theorists regarding the ontological status of systems logic. One group views such logics as existing in nature and possessing nomic necessity, while the other group views them as the arbitrary constructions of man and evaluate their logical force in terms of utility.[14]

Clearly, the present approach falls into the latter group and views the measures of message intensity as arbitrary constructions of the investigator. As such, the primary criterion for evaluating the construct is its utility--its ability to provide useful empirical relationships and meaningful explanations.

At a level more specific to relational communication, the taxonomy of relational coding schemes offered by Poole and Folger echoes and elaborates this distinction.[15] They suggest that a coding scheme adopts one of three orientations or "modes"--experienced, experiencing, or experiencer.[16] Although the three modes differ substantially in their ontological orientations, all three offer valid approaches to coding relational communication if certain necessary and sufficient conditions are met.

In the experienced mode (the orientation of this paper), the necessary condition is "face validity," while "construct validity" constitutes the sufficient condition. Face validity exists when "(a) the coding scheme accurately embodies the assumptions of the investigator's theory; and (b) the coding scheme is logically consistent and its categories are clearly defined."[17] The preceding portions of this paper were specifically designed to meet this criterion.

Construct validity, on the other hand, refers to the "relationships to other observables that are predicted by the theoretical network." In other words, if the construct in question relates in theoretically meaningful ways to other variables in the system, "this is positive evidence for the validity of the measure." Perhaps the most important aspect of construct validity for our present concerns is that "construct validity is not essentially different from the general scientific procedures for developing and confirming theories."[18]

From the preceding discussion, it is clear that face validity resides in the realm of logic and rhetoric--i.e., the investigator's ability to cogently describe and explain the construct in a consistent, understandable manner. In contrast, construct validity resides squarely in the empirical world of data--i.e., the construct's ability to relate meaningfully to other variables and to provide fruitful interpretations and explanations. With the realm of logical and rhetorical justification behind us, we now turn to the empirical world of message intensity.

METHOD

The Sample

The subjects for this study were 86 white husband and wife dyads randomly sampled from a midwestern metropolitan area. The average couple had been married for about 14 years, had two children with the youngest being 8 years of age. The husband was about 37½ years of age and the wife was slightly younger, 36 years old. Their combined family income was between $15,000 to $19,000 a year and this was their first marriage.

Procedures

After obtaining the couples agreement to participate in the study, two types of data were collected during a personal, two hour interview in their home. First, self-report data concerning various aspects of the marital relationship were obtained from each husband and wife separately; second, interaction data were obtained by tape-recording each couple's discussion of four family related topics.[19]

The couples were asked to discuss each topic with one another as completely as they could within a 10 minute time period. These recorded conversations were later transcribed and coded according to the relational communication coding procedures.

A criterion for a couple to be included in the present analysis was the manifestation of at least 55 transactions across the four topics. The average number of transactions per couple was 152, with a range from 58 to 381. The total number of transactions analyzed was approximately 13,000.

RESULTS

Two measures of intensity are utilized in the following analyses. Message intensity is the score assigned to each message according to the numerical weights given in Figure 2. Intensity distance is the absolute difference between the intensity values of two contiguous messages. (Intensity Distance = | Message Intensity $_i$ - Message Intensity $_{i+1}$ |).

The correlations between the husbands' and wives' average intensity values and their average distance values on the three control maneuvers, one-up, one-down, and one-across, are shown in Table 1.

[Table 1 About Here]

These correlations range from slight to moderate levels of association, and no single correlation is given strong interpretive emphasis. The matrix as a whole, however, would seem to imply the validity of a cybernetic model of interpersonal relationships. The similarity of the husbands' and wives' means, as well as the correlations between their intensity values (.53, .46, and .48 for one-up, one-down and one-across maneuvers, respectively) are suggestive of a homeostatic "set point" around which the couples' conversations rise and fall. The "set point" suggested in Figure 3, for example, is 12--the intensity value assigned to assertion-an-extension statements. Since these types of messages are the single most frequently observed code, it is not surprising that the "set point" falls around this value.

Husbands and wives appear to establish some intensity norm (i.e., "set point") around which their conversations tend to vary. For instance, the greater the intensity of the husband's one-up maneuvers, the greater the average absolute distance of the wife's one-down movements as a response (r = .31). Conversely, the greater the intensity value of the wife's one-up maneuvers, the greater the average absolute difference of the husband's one-down response movements (r = .39). A similar pattern is found with the one-up intensity values and the absolute distance moved away from with one-across responses (r = .41 and .54 for wives and husbands respectively).

On the other hand, if a spouse responds with a one-up movement to a one-up maneuver, the intensity of the response moves toward the intensity weight of the preceeding message (r = .36 and .30 for wives and husbands respectively). Such a finding suggests that the transact of "competitive symmetry" (††) is well named.

The height of the "set point" on the intensity axis seems to be primarily effected by the average intensity of the one-across statements, as one-across responses to one-across statements tend to stay at similar intensity levels (r = -.43 and -.42 for wives and husbands respectively.) The impression from these correlations is that (1) one-across statements set the intensity "tone," (2) one-down responses to one-up movements attempt to re-establish this "tone," and (3) the couple as a unit periodically move to a higher "pitch" (i.e., one-up responses to one-up movements) only to move back toward their set-point intensity level.

Intensity Measures, Control Maneuvers and Transact Outcomes

Displayed in the top of Table 2 are the correlations between the message intensity and distance measures and the proportion of one-up or domineering, one-down or submitting, and one-across or leveling movements transmitted. The bottom part of Table 2 reports the correla-

[Table 2 About Here]

tions between the message intensity and distance values and the proportion with which the husbands and wives were in a pure dominant position (given a ↑ maneuver, the % of ↓ responses by the spouse), a pure submission position (given a ↓ maneuver, the % of ↑ responses by the spouse) and their comparative dominance scores (given a ↑ maneuver, the % of ↓ responses minus the % of ↑ responses given to a ↑ movement).[20] The dyadic ratios shown are always computed as the husband's score divided by the wife's score.

There are several correlations of interest in Table 2, and future studies will attempt to more rigorously describe the patterns of

interaction among intensity, control maneuvers, transact and sex of interactant. This initial report will highlight the associations which seem to hold regardless of the sex of the speaker. Before discussing specific correlations, however, a few general comments about the matrix are in order.

Of the 75 correlations reported, 50 (67%) are with the average absolute difference indices of distance. Of the remaining 25, 56 percent (14) are with the average intensity of the spouses' one-down movements. This distribution of correlations underscores two issues. The first is supportive of the importance of looking at messages as social events with systemic characteristics, rather than as isolated non-social stimuli. This is not to say that the latter approach lacks utility and should be totally avoided. Rather, it is to emphasize that such an approach is incomplete and can only be made more descriptively and predictively precise by analyzing messages in their relational context. Second, a potential problem of partial correlation exists between the matrix measures since they are derived from the same coding procedures. But, a <u>lack</u> of association between the proportion of one-up (domineering) and one-across (leveling) messages transmitted and the average intensity weights of these control maneuvers should be noted. This lack of correlation provides some support for the notion that these measures are not as heavily interrelated as one would suppose, given they are derived from the same coding scheme.

Given these general remarks some of the patterns of association contained in Table 2 will now be highlighted. The correlations dealing with control maneuvers shown in the upper part of the table will be examined first.

1. The more domineering either the husband or the wife, the higher the average intensity level of their own and other's one-down movements (for husband domineeringness rs = .30 and .26, for wife rs = .33 and .34).

2. The more domineering the husband, the greater the average distance "travelled" by his one-across responses (r = .32) but the less distancing his one-up responses (r = -.26). The same pattern was also observed for the wife with her correlations being .35 for one-across and -.33 for one-up responses.

3. The more frequently the husband transmitted one-down messages, the lower the average intensity of those one-down movements (r = -.23). Similarly, the more submitting the wife, the lower the average intensity level of both her own (r = -.33) and her husband's (r = -.36) one-down maneuvers.

4. The more submitting the husband, the greater the average distance travelled by his one-across responses (r = .32). Likewise, the more submitting the wife, the greater the average distance of her (r = .18) and her husbands' (r = .34) one-across responses.

5. The more frequently the husband emitted one-across or levelling movements, the less the average distance travelled by his one-down responses (r = -.28). Likewise, the more one-across messages transmitted by the wife, the less the average distance of both her (r = -.25) and her husband's (r = -.19) one-down responses.

6. The greater the proportion of one-across messages sent by the husband, the lower the average difference between his one-across responses to preceeding messages (r = -.59). The same inverse relationship was observed for the wife (r = -.53). Again, the proportion

of her one-across statements was negatively related to the average movement (distance) of her husband's one-across responses (r = -.30).

These first six findings strongly indicate the centrality of one-across movements in establishing the couple's "set point" on the intensity axis. Further, these findings are suggestive of differential functions of these one-across statements by different individuals. For instance, findings #1 and #2 suggest that domineering individuals use one-across statements in a non-accepting, but "submissive-like" manner. Findings #3 and #4, suggest that submitting individuals use one-across statements in a non-demanding, but "domineering-like" way. In addition, findings #5 and #6 suggest a rather rigid avoidance pattern with limited variance from the "set point," perhaps in the attempt to keep conversations on an "even keel." These possible differential functions might, of course, simply reflect definitional problems in the coding scheme itself, but only future research and theory can adequately address this issue.

Turning to the bottom half of Table 2, the patterns in the correlations are not as uniform as those reported above. The overall intensity "tone" seems to vary according to whether the husband or the wife occupies the dominant or submissive position.

7. The more frequently the husband is in a pure dominant position, the greater the average absolute distance travelled by his wife's one-up responses (r = .20), by his one-down responses (r = .38), and the lower the average intensity of both his own (r = -.27) and his wife's (r = -.18) one-down statements. The more frequently the wife is in a pure dominant position, the greater the average absolute distance travelled by both her husband's (r = .32) and her own one-up

responses (r = .19), and the higher the average intensity level of her husband's one-up statements (r = .18).

8. The more the husband is in a pure submission position, the higher the mean intensity level of his wife's one-down maneuvers (r = .33), and the greater the average distance travelled by both his own (r = .19) and his wife's (r = .27) one-down responses. The more frequently the wife is in a postion of pure submission, the higher the mean intensity level of her husband's one-down statements (r = .40), but the higher the average intensity level of her own one-up statements (r = .24) and the average distance travelled by her one-up responses (r = .19).

9. The greater the husband's comparative dominance score, the less the average distance travelled by his wife's one-down maneuvers (r = -.24) and the greater the average movement of both his one-down (r = .38) and one-across (r = .24) responses. The larger the wife's comparative dominance score, the less the average distance travelled by her husband's one-down maneuvers (r = -.31), the lower the average intensity of his one-across statements (r = -.21) and the greater the intensity of his one-up responses (r = .30).

In combination, these last three findings suggest that the more one person occupies a dominant position relative to the other, the more likely the other is to make a highly intense one-up move when attempting to define the situation. Conversely, the more one person is in a pure submissive position relative to the other the more intense the other's one-down maneuvers. The first suggestion gives a "frustration image" for the non-dominant member. It appears that when this person does make a one-up movement it is an intense defini-

tional attempt to counter the other member's more frequent success in defining the situation. The second trend suggests a less "hard" pattern, where the dominance hierarchy is clearly maintained without exaggerating or emphasizing the one-down person's submissive position.

Intensity Measures and Pronoun Usage

Correlations between the wives' and husbands' average intensity values and their frequency of transmitting first-person possessive (I-me-my), plural possessive (we-us-our) and second-person possessive (you-your) pronouns are given in Table 3. These analyses were based on the assumption that pronoun usage might provide an indication of how inclusive or exclusive--distancing--the couple perceived their relationship to be. The pronoun usage scores are raw frequency counts and represent the total number of pronouns transmitted during taped discussions. The ratios are again husband scores divided by wife scores, with the exceptions of the I-me-my/we-us-our and I-me-my/you-your ratios which were calculated for the individual pronoun user.

[Table 3 About Here]

Turning to the frequency with which pronouns were used by these husband-wife pairs, approximately twice as many first-person as compared to plural possessive pronouns were observed. The wives, however, use significantly more second-person possessive pronouns that do the husbands ($\bar{X}_W$=66.0 and $\bar{X}_H$=49.4, t=2.51, p.<02). Whether this difference is unique to this sample or whether it represents a role behavioral pattern and/or socialized gender difference is an interesting question for future analysis. It is not, however, the primary focus of the present discussion.

Looking at frequency of husband and wife pronoun usage and the intensity values of one-up, one-down, and one-across movements, it is quite obvious that they are not strongly related. However, the correlations that do appear, suggest a different pattern of usage. Six of the seven correlations with one-up movements are with the wife's message intensity values, while five of the six correlations with one-across movements are with the husband's intensity distance values.

These correlations suggest that the higher the intensity of the wife's one-up messages, the more she uses all types of pronouns relative to her husband's (r's = -.22, -.21, and -.23). Further, the higher the intensity of her one-up messages, the less likely her husband is to use plural possessive pronouns (r = -.30) and the more likely she is to use second-person pronouns (r = .26).

On the other hand, the higher the intensity of the wife's one-down movements, (1) the larger the number of first-person pronouns used by the husband (r = .26), (2) the more first-person pronouns used by the husband relative to his use of plural possessive pronouns (r = .22), and (3) the more she used first-person as compared to plural possessive pronouns (r = .27).

In general, the above set of correlations fit together in a way that is somewhat supportive of pronoun usage being an indicant of perceived distance within the pair. The higher the intensity of a wife's one-up and one-down movements, the less likely both husband and wife are to use inclusive pronouns (we-us-our) and the more likely they are to use exclusive pronouns (I-me-my and you-your).

The husband's frequency of pronoun usage was inversely associated with the intensity distance travelled by his one-across and one-down responses to his wife. As was noted, this is in contrast to the direct relationship between pronoun usage by wife and the intensity level of her statements. In terms of one-across responses, the less frequently the husband transmitted first-person ($r = -.33$), plural possessive ($r = -.27$) and second-person ($r = -.28$) pronouns, the greater the distance travelled by his one-across responses to his wife's movements. The negative correlations with the plural and second-person ratios further support this pattern of inverse relationships ($r = -.22$ and $-.24$ respectively).

Concerning his one-down movements, the higher their average intensity value, the more frequently he emitted first-person and plural possessive pronouns ($r = .30$ and $.29$) relative to his wife's use of these terms. Moreover, the greater the distance travelled by his one-down responses to his wife, the fewer the number of first-person and plural possessive pronouns emitted relative to his wife's use of these words ($r = -.27$ and $-.18$, respectively).

In general, frequency of pronoun usage by the husband was related to the average distance travelled by his one-across and one-down responses. These associations were all negative, hence the fewer the number of pronouns emitted, the greater the distance travelled by the husband's response to his wife's movements and vice versa. This pattern was not discriminating, however, by the type of inclusive or exclusive pronoun usage.

The combined associations found in Table 3 suggest that wives use pronouns and one-up movements to assert themselves relative to

the other, while husbands' lack of pronoun usage is related to a denial of his own rights within that relationship. Evidence for this interpretation is more suggestive than confirming. However, to the extent that pronoun usage is an indicant of perceived relational separateness (e.g., I and You) and togetherness (e.g., We), the correlational data suggest some validity and utility of the distance metaphor in the study of message intensity and dyadic relationships.

Message Intensity and Self-Report Indices

In addition to those variables discussed previously, the degree of relationship between message and intensity (1) dyadic understanding, (2) communication satisfaction, and (3) two dyadic pattern indices (rigidity and stability) was also investigated. These findings are reported in Table 4.

[Table 4 About Here]

As can be seen, there was a slight tendency for the wife's one-up intensity values to be negatively related to both her own ($r = -.18$) and her husband's ($r = -.18$) level of understanding and their communication satisfaction scores ($r = -.27$ and $-.20$, respectively).[21] The distance travelled by the wife's one-up responses is also negatively related to the husband's level of understanding ($r = -.22$), and her reported satisfaction with their interspousal communication ($r = -.23$). Taken as a whole, however, the correlations in Table 4 are infrequent and small in magnitude. Consequently, no theoretical interpretation will be attempted.

The correlations between intensity values and rigidity and stability were slightly larger and possibly of more substantive significance.[22] Rigidity and stability were conceived of as indicants of the amount of modulation in the couple's transactional wave pattern. Rigidity refers to the frequency with which the assertion and acceptance of definitional rights alternate between the interactants, while stability refers to the consistency of the above pattern. Thus, intensity values should be negatively related to both rigidity and stability. The correlations shown in Table 4 confirm these expectations and encourage their continued investigation. The correlations indicate that the intensity value of one-down movements was primarily responsible for unstable patterns ($r = -.35$ and $-.21$ for husbands and wives respectively), and that the absolute distance travelled by one-across responses was primarily responsible for flexible patterns ($r = -.57$ and $-.41$ for husbands and wives respectively). Future studies will attempt to more precisely delineate the size and the direction of the relationships between message intensity weights and rigidity and stability scores.

CONCLUSION

The purpose of this paper was to introduce the concept of message control intensity. It was argued that an intensity measure is a necessary step toward more refined descriptions of transactional patterns. The measure proposed was based on the implicit logic contained within the Rogers and Farace relational coding scheme. This "logic" defined a hypothetical intensity continuum with each of the fifty message types delineated in the coding scheme representing discrete points along the continuum. By graphing the distance between contiguous messages, conversational waves can be created to describe the transactional pattern of the system's communication behaviors.

Having established the measure's face validity, the issue of its empirical or construct validity was addressed. This initial exploration is correlational and, therefore, is not definitive in establishing the usefulness of these intensity indices. Nevertheless, the correlations reported are encouraging and support the continued investigation of these measures. The intensity measures clearly suggest a homeostatic nature of conversations among persons in long-term relationships. These interpersonal conversations appear to revolve around some intensity "set point" in consistent ways. Moreover, these intensity measures help to further describe and differentiate married couples in terms of dominance patterns and the differential uses of control maneuvers.

To the extent that pronoun usage indicates the couples' own perceived inclusiveness, the intensity measures seem to have some utility in tapping these distance perceptions (i.e., measures

developed from an experienced mode apparently have some validity within the experiencer perspective). Finally, the correlations reported indicate that the rigidity and stability characteristics of the dyads' control dimensions are strongly interrelated with the couples' intensity values and movements.

In sum, we believe this preliminary analysis indicates that the message control intensity measure has received sufficient face validity and construct validity to encourage continued development. Future investigations should be able to refine this concept and provide further evidence of its utility in describing the transactional form of social relationships.

FOOTNOTES

[1]Paul Watzlawick, Janet H. Beavin, and Don D. Jackson, Pragmatics of Human Communication (New York: W. W. Norton, 1967). See also, Frank E. Millar and L. Edna Rogers, "A Relational Approach to Interpersonal Communication," in Explorations in Interpersonal Communication, ed. Gerald Miller (Beverly Hills, Calif.: Sage Publications, 1976), pp. 87-103; and B. Aubrey Fisher, "Current Status of Interaction Analysis Research," paper presented to SCA, Minneapolis, Minn., 1978.

[2]Gregory Bateson, "Information and Codification: A Philosophical Approach," in Communication: The Social Matrix of Psychiatry, eds. Jurgen Reusch and Gregory Bateson (New York: W. W. Norton, 1951), pp. 168-211. Cf., Fisher, "Current Status of Interaction Analysis Research."

[3]Hugh D. Duncan, Symbols in Society (London: Oxford University Press, 1968).

[4]Arthur Koestler, Janus: A Summing Up (New York: Vintage Books, 1978).

[5]L. Edna Rogers and Richard V. Farace, "Analysis of Relational Communication in Dyads: New Measurement Procedures," Human Communication Research, 1 (1975), 222-239.

[6]Malcolm Parks, "Relational Communication: Theory and Research," Human Communication Research, 3 (1977), 372-381.

[7]L. Edna Rogers, "Dyadic Systems and Transactional Communication in a Family Context," Diss. Michigan State University, 1972.

[8]Philip Ericson and L. Edna Rogers, "New Procedures for Analyzing Relational Communication," Family Process, 12 (1973), 245-267.

[9]See, Rogers, Diss., p. 234.

[10]Rogers and Farace, p. 234.

[11]Donald G. Ellis, "Relational Control in Two Group Systems," Communication Monographs, 46 (1979), 153-166.

[12]See, Pragmatics, p. 86.

[13]In addition to the Rogers and Farace article, see L. Edna Rogers-Millar, "Relational Communication Control Coding Manual," paper presented to ICA, Philadelphia, Penn., 1979.

[14]Donald P. Cushman and W. Barnett Pearce, "Generality and Necessity in Three Types of Theory About Human Communication with Special Attention to Rules Theory," Human Communication Research, 3 (1977), 344-353.

[15]Michael Poole and Joseph Folger, "Overature to Interaction Research: A Theory of Validation for Interaction Coding Schemes," paper presented to SCA, Minneapolis, Minn., 1978.

[16]The experienced mode discussed by Poole and Folger "assumes that interaction is best understood and explained by an external observer . . . [that] subjects' perceptions do not enter into theories couched in the experienced mode [and] variables are operationalized by the external observer" (pp. 5-6). The researcher adopting an experiencing mode "assumes that the key to understanding and explaining interaction lies in characterizing the socially-constructed reality which participants in an interaction share" (p. 7). In this perspective, the conceptual terms are "social constructs" which are either culturally shared by the participants prior to their interaction or negotiated meanings arrived at during conversation. In this perspective, the researcher "attempts to get at what is common to the participants in the inter-

action [and the] variables are operationalized in terms of the consensus of the participants in the interaction" (p. 8). Finally, the experiencer mode uses "individual psychological constructs" to understand and explain interaction behavior. The researcher assumes that "interaction is best understood and explained in terms of the interpretations of each individual who participates in the interaction" (p. 10). This mode operationalizes variables "in terms of subjects' perceptions or interpretations" so that the researcher can ideally achieve "an understanding of each participant's point of view and explain the interaction in terms of the meshing of individual viewpoints" (p. 10).

[17]Poole and Folger, p. 16.

[18]Lee Cronback and Paul Meehl, "Construct Validity in Psychological Tests," Psychological Bulletin, 4 (1955), p. 300.

[19]The four topics used in this study were: (1) how did you meet and decide to marry; (2) how do you relate the happenings of the day to each other; (3) how do you deal with disagreements between you; and (4) how does a couple develop and maintain a strong marital and family relationship.

[20]For a more complete description of these, see L. Edna Rogers-Millar and Frank E. Millar III, "Domineeringness and Dominance: A Transactional View," Human Communication Research, 5 (1979), 238-246 and John A. Courtright, Frank E. Millar and L. Edna Rogers-Millar, "Domineeringness and Dominance: Replication and Expansion," Communication Monographs, 46 (1979), 179-192. See also, Frank E. Millar, L. Edna Rogers-Millar and John A. Courtright, "Relational Control and Dyadic Understanding: An Exploratory Predictive Regression Model," Communication Yearbook III, ed. Dan Nimmo (New Brunswick, N. J.: Transaction Books, 1979) pp. 213-224.

[21]A complete discussion of the dyadic understanding measure may be found in Millar, et al., Communication Yearbook III.

[22]The rigidity-flexibility and stability-instability continua of control patterns are discussed in detail in Millar and Rogers, "A Relational Approach to Interpersonal Communication."

FIGURE 1: CONTROL DIRECTIONS OF MESSAGE TYPES

	support 1	non-support 2	extension 3	answer 4	instruction 5	order 6	disconfirmation 7	topic change 8	initiates-terminates 9	other 0
assertion 1	↓	↑	→	↑	↑	↑	↑	↑	↑	→
question 2	↓	↑	↓	↑	↑	↑	↑	↑	↑	↓
talk-over 3	↓	↑	↑	↑	↑	↑	↑	↑	↑	↓
non-complete 4	↓	↑	→	↑	↑	↑	↑	↑	→	→
other 5	↓	↑	→	↑	↑	↑	↑	↑	↑	→

FIGURE 2: PROPOSED INTENSITY WEIGHTS OF MESSAGE TYPES

	disconfirmation 10	order 9	topic change 8	non-support 7	instruction 6	answer 5	initiates-terminates 4	extension 3	other 2	support 1
talk-over 5	50	45	40	35	30	25	20	15	10	5
assertion 4	40	36	32	28	24	20	16	12	8	4
other 3	30	27	24	21	18	15	12	9	6	3
question 2	20	18	16	14	12	10	8	6	4	2
non-complete 1	10	9	8	7	6	5	4	3	2	1

FIGURE 3: TRANSACTIONAL GRAPH USING MESSAGE CONTROL INTENSITY VALUES

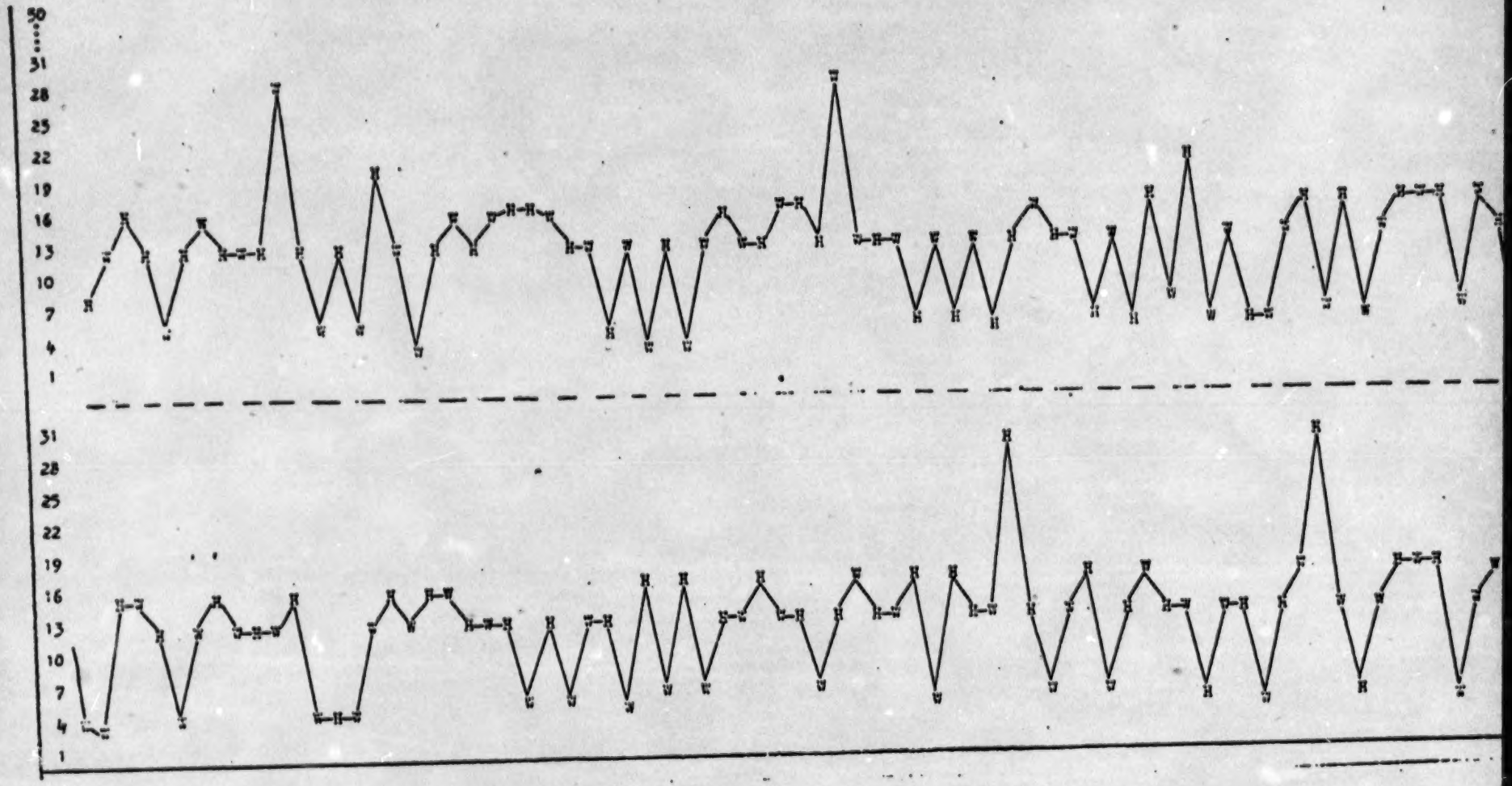

TABLE 1: CORRELATIONS BETWEEN HUSBAND AND WIFE AVERAGE INTENSITY AND DISTANCE VALUES

		WIFE							
		Intensity (↑)	Distance (↑)	Intensity (↓)	Distance (↓)	Intensity (→)	Distance (→)	Mean	S.D.
HUSBAND	Intensity (↑)	.53	.36	**	.31	**	.41	18.74	2.20
	Distance (↑)	.30	.39	**	.22	-.36	.43	8.41	2.49
	Intensity (↓)	**	**	.46	**	**	-.21	4.91	0.59
	Distance (↓)	.39	.22	**	**	**	.19	8.00	1.70
	Intensity (→)	**	-.22	**	**	.48	-.43	10.89	0.83
	Distance (→)	.54	.40	**	**	-.42	.39	4.61	1.63
	Mean	18.74	8.84	4.83	8.40	10.84	4.28		
	S.D.	2.22	2.74	0.56	2.23	0.89	1.43		

$r = .18, p < .10$
$r = .22, p < .05$
$r = .28, p < .01$
$r = .35, p < .001$

TABLE 2: CORRELATIONS OF AVERAGE INTENSITY AND DISTANCE VALUES, WITH CONTROL MANEUVERS AND TRANSACTIONS

		Intensity (↑)		Distance (↑)		Intensity (↓)		Distance (↓)		Intensity (→)		Distance (→)	
		H	W	H	W	H	W	H	W	H	W	H	W
Domineering	H	**	.24	-.26	**	.30	.26	**	**	**	.22	.32	**
(%↑)	W	**	**	**	-.33	.34	.33	**	.45	**	**	**	.36
	Ratio	**	**	**	.19	**	**	.20	-.35	**	**	.27	-.24
Submitting	H	**	**	.31	.22	-.23	**	**	-.20	**	-.19	.32	**
(%↓)	W	**	**	**	.34	-.36	-.33	**	-.23	**	**	.34	.18
	Ratio	**	**	**	**	.22	**	-.26	**	**	**	**	**
Leveling	H	**	-.31	**	**	**	**	-.28	**	**	**	-.59	**
(%→)	W	**	**	**	**	**	**	-.19	-.25	**	**	-.30	-.53
	Ratio	**	**	**	**	**	**	**	.31	**	**	**	.37
Pure Dominance	H	**	**	**	.20	-.27	-.18	.38	**	**	-.19	.20	.24
(↑,%↓)	W	.18	**	.32	.19	**	**	**	**	**	**	**	**
	Ratio	-.26	**	.19	**	**	**	.25	-.23	**	**	**	**
Pure Submission	H	**	**	**	**	**	.33	.19	.27	**	**	-.21	**
(↓,%↑)	W	**	.24	**	.19	.40	**	**	**	.21	**	**	**
	Ratio	**	-.30	**	-.18	-.21	**	**	**	**	**	-.24	**
Comparative Dominance	H	**	**	**	**	-.20	**	.38	-.24	**	**	.24	**
(%↑↓ - ↑↑)	W	**	**	.30	**	**	**	-.31	**	-.21	**	**	**
	Ratio	**	**	**	**	**	**	.45	-.24	**	**	.25	**

r = .18, p < .10
r = .21, p < .05
r = .28, p < .01
r = .35, p < .001

TABLE 3: CORRELATIONS BETWEEN INTENSITY MEASURES AND FREQUENCY OF PRONOUN USEAGE

		Intensity (↑)		Distance (↑)		Intensity (↓)		Distance (↓)		Intensity (→)		Distance (→)		Mean Frequency	S.D.
		H	W	H	W	H	W	H	W	H	W	H	W		
I-Me-My	H	**	**	**	**	**	.26	**	**	**	**	-.35	**	86.8	59.12
	W	**	**	**	**	**	**	**	**	**	**	**	**	88.5	58.95
	Ratio	**	-.22	**	**	.30	**	-.27	**	**	**	**	**	1.35	1.38
We-Us-Our	H	**	-.30	**	**	**	**	-.18	**	**	**	-.27	**	42.14	25.08
	W	**	**	**	**	**	**	**	**	**	**	**	**	44.0	26.70
	Ratio	**	-.21	**	**	.29	.20	-.18	**	**	**	-.22	**	1.44	1.73
You-Your	H	**	-.18	**	**	**	**	**	**	**	**	-.28	**	49.4	45.72
	W	.27	.26	**	**	**	**	**	**	.20	**	**	**	66.0	41.45
	Ratio	**	-.23	**	**	**	**	**	**	**	**	-.24	**	1.12	1.78
I-Me-My/ Us-Our-We Ratio	H	.33	.20	.19	**	**	.22	**	.19	**	**	**	**	2.43	1.56
	W	**	**	**	**	**	.27	**	**	**	**	**	**	2.44	1.88
I-Me-My/ You-Your Ratio	H	**	**	**	**	**	**	-.24	.30	**	**	**	.19	2.14	1.57
	W	**	**	**	-.20	**	**	**	**	-.18	**	**	**	1.46	0.67

r = .18, p < .10
r = .21, p < .05
r = .28, p < .01
r = .35, p < .001

TABLE 4: CORRELATIONS BETWEEN INTENSITY AND SELF-REPORT AND DYADIC PATTERN INDICES

	Intensity (↑)		Distance (↑)		Intensity (↓)		Distance (↓)		Intensity (→)		Distance (→)	
	H	W	H	W	H	W	H	W	H	W	H	W
Understanding H	**	-.18	**	-.22	**	**	**	**	**	.19	-.28	**
W	**	-.18	**	**	**	**	**	**	**	**	**	**
Communication H	-19	-.20	**	**	**	**	**	**	**	**	**	-.20
Satisfaction W	**	-.27	**	-.23	**	**	**	**	**	**	**	-.20
Rigidity	**	-.24	**	**	**	**	-.26	**	**	**	-.57	-.41
Stability	**	**	**	**	-.35	-.21	**	**	-.21	**	.26	**

r = .18, p < .10
r = .22, p < .05
r = .28, p < .01
r = .35, p < .001